

# **PRESTO W92tt**

# **Powerful Temperature Control Systems for demanding applications** with a temperature range from -92 °C to +250 °C

PRESTO W92 - Highly Dynamic Temperature Control Systems The PRESTO W92 Highly Dynamic Temperature Control Systems are amongst the most powerful units available. Their impressive power is harnessed by cutting-edge control technology. The W92 provides extraordinary heating, cooling, and pumping performance. But it also comes with the functions and features that make the new generation of PRESTO so unique.

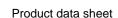
#### Your advantages

- · Powerful circulating pumps, electronically adjustable in stages or by setting the pressure value Choose between a magnetically coupled centrifugal pump or a magnetically coupled gear pump for pressures up to 5.5 bar and virtually constant flow rate at any pressure
- Integrated 5.7" industrial color touchscreen displays all essential information and enables simple fingertip control
- · Extensive warning, protection, and monitoring functions with detailed self-explanatory messages
- · ICC cascade control for extraordinary precision, temperature stability ±0.05 °C ... ±0.2 °C
- Ambient temperature range +5 °C to +40 °C
- · Integrated programmer with real-time clock
- · Filling level indicator and pump capacity displayed electronically
- · Interface for SD memory card
- Connections for USB, Ethernet, RS232, and Alarm output
- · Optional analog connections, RS485, Profibus DP, Modbus
- · 2-stage water-cooled refrigeration system



# **Technical Data**

Order No.         9421922.TT           Category         Temperature Control PRESTO           Working temperature range (°C)         -92 +250           Temperature control         ICC           Temperature stability (°C)         ±0.05 ±0.2           Setting / display resolution         0.01 °C           Temperature Display         TFT Touchscreen           Heating capacity (kW)         36           Cooling capacity (Medium Ethanol)         °C 200 100 20 0 -20 -40 -60 -80 kW 31 29 19 15.5 9.5 9 6.5 1.5           Pump capacity flow rate (l/min)         26 80           Pump capacity flow pressure (bar)         0.5 3.0           Pump connections         M38x1.5           Refrigerant         R23, R404A           External Pt100 sensor connection         integrated           Digital interface         RS232, SD memory card, USB, Ethernet, Modbus, Alarm-out		
Working temperature range (°C)       -92 +250         Temperature control       ICC         Temperature stability (°C)       ±0.05 ±0.2         Setting / display resolution       0.01 °C         Temperature Display       TFT Touchscreen         Heating capacity (kW)       36         Cooling capacity (Medium Ethanol)       °C 200 100 20 0 -20 -40 -60 -80 kW 31 29 19 15.5 9.5 9 6.5 1.5         Pump capacity flow rate (I/min)       26 80         Pump capacity flow pressure (bar)       0.5 3.0         Pump connections       M38x1.5         Refrigerant       R23, R404A         External Pt100 sensor connection       integrated         Digital interface       RS232, SD memory card, USB, Ethernet, Modbus,	Order No.	9421922.TT
Temperature control         ICC           Temperature stability (°C)         ±0.05 ±0.2           Setting / display resolution         0.01 °C           Temperature Display         TFT Touchscreen           Heating capacity (kW)         36           Cooling capacity (Medium Ethanol)         °C 200 100 20 0 -20 -40 -60 -80 kW 31 29 19 15.5 9.5 9 6.5 1.5           Pump capacity flow rate (I/min)         26 80           Pump capacity flow pressure (bar)         0.5 3.0           Pump connections         M38x1.5           Refrigerant         R23, R404A           External Pt100 sensor connection         integrated           Digital interface         RS232, SD memory card, USB, Ethernet, Modbus,	Category	Temperature Control PRESTO
Temperature stability (°C)	Working temperature range (°C)	-92 <b>+</b> 250
Setting / display resolution         0.01 °C           Temperature Display         TFT Touchscreen           Heating capacity (kW)         36           Cooling capacity (Medium Ethanol)         °C 200 100 20 0 -20 -40 -60 -80 kW 31 29 19 15.5 9.5 9 6.5 1.5           Pump capacity flow rate (I/min)         26 80           Pump capacity flow pressure (bar)         0.5 3.0           Pump connections         M38x1.5           Refrigerant         R23, R404A           External Pt100 sensor connection         integrated           Digital interface         RS232, SD memory card, USB, Ethernet, Modbus,	Temperature control	ICC
Temperature Display         Heating capacity (kW)       36         Cooling capacity (Medium Ethanol)       °C 200 100 20 0 -20 -40 -60 -80 kW 31 29 19 15.5 9.5 9 6.5 1.5         Pump capacity flow rate (I/min)       26 80         Pump capacity flow pressure (bar)       0.5 3.0         Pump connections       M38x1.5         Refrigerant       R23, R404A         External Pt100 sensor connection       integrated         Digital interface       RS232, SD memory card, USB, Ethernet, Modbus,	Temperature stability (°C)	±0.05 ±0.2
Heating capacity (kW)  Cooling capacity (Medium Ethanol)  Cooling capacity (Medium Eth	Setting / display resolution	0.01 °C
Cooling capacity (Medium Ethanol)         °C         200         100         20         0         -20         -40         -60         -80           kW         31         29         19         15.5         9.5         9         6.5         1.5           Pump capacity flow pressure (bar)         0.5 3.0           Pump connections         M38x1.5           Refrigerant         R23, R404A           External Pt100 sensor connection         integrated           Digital interface         RS232, SD memory card, USB, Ethernet, Modbus,	Temperature Display	TFT Touchscreen
kW       31       29       19       15.5       9.5       9       6.5       1.5         Pump capacity flow pressure (bar)       0.5 3.0         Pump connections       M38x1.5         Refrigerant       R23, R404A         External Pt100 sensor connection       integrated         Digital interface       RS232, SD memory card, USB, Ethernet, Modbus,	Heating capacity (kW)	36
Pump capacity flow pressure (bar)  O.5 3.0  Pump connections  M38x1.5  Refrigerant  R23, R404A  External Pt100 sensor connection  Digital interface  RS232, SD memory card, USB, Ethernet, Modbus,	Cooling capacity (Medium Ethanol)	
Pump connections M38x1.5  Refrigerant R23, R404A  External Pt100 sensor connection integrated  Digital interface RS232, SD memory card, USB, Ethernet, Modbus,	Pump capacity flow rate (I/min)	26 80
Refrigerant R23, R404A  External Pt100 sensor connection integrated  Digital interface RS232, SD memory card, USB, Ethernet, Modbus,	Pump capacity flow pressure (bar)	0.5 3.0
External Pt100 sensor connection integrated  Digital interface RS232, SD memory card, USB, Ethernet, Modbus,	Pump connections	M38x1.5
Digital interface RS232, SD memory card, USB, Ethernet, Modbus,	Refrigerant	R23, R404A
	External Pt100 sensor connection	integrated
	Digital interface	





	Optional: RS485, Profibus
Ambient temperature	5 40 °C
Dimensions W x L x H (cm)	95 x 127 x 190
Weight (kg)	805
Sound pressure level (distance 1 m) max. (dBA)	74
Viscosity max. (cSt)	50
Process volume min. (active heat exchanger volume) liters	28 (16)
Internal usable expansion vol. (liters)	40
Classification according to DIN12876-1	Classification III (FL)
Analog connection input / output	Optional
Cooling of compressor	2-stage Water
Cooling water connection	G $34$ " male with barbed fittings for tubing $12$ " ID
Cooling water consumption (I/min)	1643
Cooling water differential pressure (bar)	0.5
Available voltage versions	400V/3PNPE/50Hz 480V/3PPE/60Hz

All data refers to the nominal voltage of 400 V, 3-phase, nominal frequency of 50 Hz and ambient temperature of +20 °C. Cooling capacity measured at max. pump stage. All pump data refers to a bath fluid with a specific density of 1 kg/dm3.

### Characteristics

# Display



# TFT State-of-the-art display technology

TFT Display for comfortable user guidance, colored display of measurement values, graphs and control options, user-defined views

# Operation



### Optimal ease of use

Touch screen for direct operation via display



#### Instructions inside

Help menus and explanations in plain text for all control options, help messages and warning messages



## Multilingual user guidance

Language selection for display of control options, notifications and warning messages via touchscreen



#### Convenience for several users

Administrator level for customizing instrument settings, user levels with limited permissions for fast and safe defined access, password protection, all levels adjustable

# Temperature Control



# ICC For perfect results

'Intelligent Cascade Control', automatic & self optimizing adjustment of PID control parameters, temperature stability ±0.01 °C ... <±0.2 °C



# TGF Full control

'Temperature Control Features', for individual optimization, access to all important control parameters, additional settings for band limit, limits, co-speedfactor etc.



#### Control from the external application

External Pt100 sensor connection for precise measurement and control directly in the external application



#### Highest measuring accuracy

'Absolute Temperature Calibration' for manual compensation of a temperature difference, 3-point calibration

# Refrigeration Technology



# Consistent cooling capacity

Easily removable venting grid for quick and easy cleaning



# 100 % Cooling capacity

'Active Cooling Control' for cooling available throughout the entire working temperature range, fast cool-down even at higher temperatures



#### **Energy saving cooling**

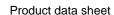
Proportional cooling control for automatic adjustment of cooling power or temporary switch-off of compressor as needed to save up to 90 % energy in comparison to unregulated cooling machines

# **Technical Features**



## Intelligent pump system

Reliable and consistent pump capacity, electronically adjustable pump stages or pressure value, automatic adjustment of pump capacity to viscosity







#### Communication via networks

For the remote control of instruments via Ethernet networks, full access to all functions of the unit via a networkcapable PC



#### Intelligent communication

USB connection for data exchange (e.g. service data) or for wireless remote control via WirelessTEMP®



#### Data exchange via SD-Card

For data exchange (e.g. service data) via SD memory card



#### Connections according to standard

RS232/RS485 dual-interface for serial data transmission according to EIA-485 industry standard (2-wire bus technology), upgradable with Profibus DP



#### Comfortable program control

Integrated programmer for the execution of time and temperature dependant profiles, 8 temperature profiles with 60 steps max., with real time clock



# Quiet as a whisper

Efficient components produce only a minimal sound decibel level



# Space-saving footprint

All connections as well supply and exhaust air are located at the front or rear, no venting grids on the sides, units can be placed close to each other or the application



# Continuous operation up to +40

Robust temperature control instrument, continuous operation even at ambient temperatures of up to +40 °C



## EASY Easy transport by one person

Ergonomic design facilitates moving and positioning by one person



# Filling level at a glance

Backlit indicator for selected pump stages and filling volume

#### Warning & Safety Functions



#### Early warning system for high/low temperature limits

Maximum safety for applications, optical and audible signal when limits are exceeded.



# OO Duplicate safety

Adjustable high temperature cut-off for internal tank and for integrated expansion vessel



#### For flammable bath fluid

Classification III (FL) according to DIN 12876-1



# BLACK Quick support

If an error occurs, the integrated Black-Box function permits fast diagnosis by the JULABO service team

Distributed by:



**Tallaght Business Park** Whitestown, Dublin 24, Ireland **D24 RFK3** 

Tel: (01) 4523432 Fax: (01) 4523967

Web: www.labunlimited.com

Quatro House, Frimley Road, Camberley,

**United Kingdom GU16 7ER** 

Tel: 08452 30 40 30 Fax: 08452 30 50 30

E-mail: info@labunlimited.com E-mail: info@labunlimited.co.uk Web: www.labunlimited.co.uk